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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,320	04/01/2004	Ramadas Lakshmikanth Pai	15472US02	9138

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EXAMINER

HOLDER, ANNER N

ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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09/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/816,320	PAI ET AL.	
	Examiner	Art Unit	
	Anner Holder	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: [IPai_Bkar3] and [IPai_Bkar4] should be removed from ¶ 0051 page 4.

Appropriate correction is required.

Claim Objections

2. Claim 2 is objected to because of the following informalities: [IPai_Bkar5] is included in the claim and should be removed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 2, 8, and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Wise et al. (Wise) US 2003/0156652 A1.

5. As to claim 1, Wise teaches a circuit for determining addresses for reference pixels, said circuit comprising: an input for receiving parameters, the parameters comprising a picture type indicator for indicating a type of a picture; [Pg. 51 ¶ 0682 Table A.3.2] and logic for determining whether the parameters received by the input are valid. [Fig. 23; Fig. 131; Fig. 127; Pg. 39 ¶ 0505, ¶ 0510; Pg. 142 ¶ 2073, ¶ 2079; Pg. 148 ¶ 2236]

6. As to claim 2, Wise teaches an arithmetic logic unit for calculating one or more addresses depending on whether the logic determines that the addresses are valid. [Fig. 23; Fig. 131; Fig. 127; Pg. 39 ¶ 0505, ¶ 0510; Pg. 142 ¶ 2073, ¶ 2079; Pg. 148 ¶ 2236]
7. As to claim 8, Wise teaches receiving parameters, the parameters comprising a picture type indicator for indicating a type of a picture; [Pg. 51 ¶ 0682 Table A.3.2] and determining the validity of the parameters; [Fig. 23; Fig. 131; Fig. 127; Pg. 39 ¶ 0505, ¶ 0510; Pg. 142 ¶ 2073, ¶ 2079; Pg. 148 ¶ 2236] and calculating one or more addresses after determining the validity of the parameters, if the parameters are valid. [Fig. 23; Fig. 131; Fig. 127; Pg. 39 ¶ 0505, ¶ 0510; Pg. 142 ¶ 2073, ¶ 2079; Pg. 148 ¶ 2236]
8. As to claim 9, Wise teaches fetching pixels from the one or more addresses after determining the validity of the parameters, if the parameters are valid. [Pg. 163 ¶ 2587]
9. Claims 3-7, 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wise et al. (Wise) US 2003/0156652 A1 in view of Kim et al. (Kim) US 6,215,823 B1.
10. As to claim 3, Wise teaches the limitations of circuit of claim 1.

Wise does not specifically teach the logic determines whether the parameters received by the input are valid based on the picture type indicator and the number of motion vectors received by the input.

Kim teaches the logic determines whether the parameters received by the input are valid based on the picture type indicator and the number of motion vectors received by the input. [Col. 1 Lines 44-57]

It would have been obvious to one of ordinary skill in the art to combine the teachings of Kim with the coding device of Wise reduce errors in image reproduction and the speed of decoding.

11. As to claim 4, Wise (modified by Kim) teaches a control register for providing the type of pictures and indicating the number of motion vectors received to the logic. [Wise- Pg. 51 ¶ 0682 Table A.3.2; Kim - Col. 1 Lines 44-57; Fig. 1; Fig. 4]

12. As to claim 5, Wise (modified by Kim) teaches one or more motion vector registers for storing motion vectors received by the input; [Wise - Pg. 51 ¶ 0682 Table A.3.2] and wherein the control register comprises one or more bits, each of which are associated with a corresponding one or the one or more motion vector registers, wherein the one or more bits are in a particular state, based on whether the corresponding motion vector register stores a motion vector. [Kim - Abstract; Col. 1 Lines 44-57; Fig. 1; Fig. 4; Fig. 6; Col. 6 Lines 8-12]

13. As to claim 6, Wise (modified by Kim) teaches the logic determines that the parameters are invalid if the control register indicates that the type of picture is an I-picture and any of the one or more bits are in the particular state. [Wise- Pg. 51 ¶ 0682 Table A.3.2; Pg. ¶ 0160; Pg. 13 ¶ 0165; Pg. 18 ¶ 0220-0221; Pg. 117 ¶ 1595; Kim - Abstract; Col. 1 Lines 44-57; Fig. 1; Fig. 4; Fig. 6; Col. 6 Lines 8-12]

14. As to claim 7, Wise (modified by Kim) teaches the logic determines that the parameters are invalid if the control register indicates that the type of picture is a B-picture and less than two of the one or more bits are in the particular state. [Wise- Pg. 51 ¶ 0682 Table A.3.2; Pg. ¶ 0160;

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Pg. 13 ¶ 0165; Pg. 18 ¶ 0220-0221; Pg. 117 ¶ 1595; Kim - Abstract; Col. 1 Lines 44-57; Fig. 1; Fig. 4; Fig. 6; Col. 6 Lines 8-12]

15. As to claim 10, Wise teaches the limitations of claim 8.

Wise does not specifically teach determining the validity of the parameters is based on the picture type indicator and the number of motion vectors received.

Kim teaches determining the validity of the parameters is based on the picture type indicator and the number of motion vectors received. [Col. 1 Lines 44-57]

16. It would have been obvious to one of ordinary skill in the art to combine the teachings of Kim with the coding device of Wise allowing for reduction of errors in image reproduction and the speed of decoding.

17. As to claim 11, Wise (modified by Kim) teaches determining the validity of the parameters further comprises determining that the parameters are invalid if the type of picture is an I-picture and any motion vectors are received. [Wise- Pg. 51 ¶ 0682 Table A.3.2; Pg. ¶ 0160; Pg. 13 ¶ 0165; Pg. 18 ¶ 0220-0221; Pg. 117 ¶ 1595; Kim - Abstract; Col. 1 Lines 44-57; Fig. 1; Fig. 4; Fig. 6; Col. 6 Lines 8-12]

18. As to claim 12, Mihara (modified by Wise and Kim) teaches determining the validity of the parameters further comprises determining that the parameters are invalid if the control register indicates that the type of picture is a B-picture and less than two of the one or more bits are in the particular state. [Wise- Pg. 51 ¶ 0682 Table A.3.2; Pg. ¶ 0160; Pg. 13 ¶ 0165; Pg. 18 ¶ 0220-0221; Pg. 117 ¶ 1595; Kim - Abstract; Col. 1 Lines 44-57; Fig. 1; Fig. 4; Fig. 6; Col. 6 Lines 8-12]

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19. As to claim 13, Wise teaches a video decoder for decoding macroblocks, said video decoder comprising: a processor for decoding a set of parameters, [Abstract; Pg. 1 ¶ 0002] a picture type parameter indicating a type of picture; [Pg. 51 ¶ 0682 Table A.3.2] a motion vector address computer for determining the validity of the set of parameters, and calculating addresses associated with motion vectors if the set of parameters are valid; [Fig. 23; Fig. 131; Fig. 127; Pg. 39 ¶ 0505, ¶ 0510; Pg. 142 ¶ 2073, ¶ 2079; Pg. 148 ¶ 2236] and a video request manager for fetching reference pixels at the addresses calculated by the motion vector address computer, if the motion vector address computer determines that the set of parameters are valid. [Pg. 31 ¶ 0400; Pg. 163 ¶ 2587]

Wise does not specifically teach motion vectors indicating reference pixels associated with the macroblock.

Kim teaches motion vectors indicating reference pixels associated with the macroblock. [Col. 1 Lines 44-57]

It would have been obvious to one of ordinary skill in the art to combine the teachings of Kim with the coding device of Wise allowing for reduction of errors in image reproduction and the speed of decoding.

20. As to claim 14, Wise (modified by Kim) teaches the motion vector address computer further comprises: an input for receiving parameters, the parameters comprising a picture type indicator for indicating a type of a picture; [Wise - Pg. 51 ¶ 0682 Table A.3.2] and logic for determining whether the parameters received by the input are valid. [Fig. 23; Fig. 131; Fig. 127; Pg. 39 ¶ 0505, ¶ 0510; Pg. 142 ¶ 2073, ¶ 2079; Pg. 148 ¶ 2236]

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21. As to claim 15, Wise (modified by Kim) teaches the motion vector address computer further comprises: an arithmetic logic unit for calculating one or more addresses after the logic determines that the addresses are valid. [Wise - Fig. 23; Fig. 131; Fig. 127; Pg. 39 ¶ 0505, ¶ 0510; Pg. 142 ¶ 2073, ¶ 2079; Pg. 148 ¶ 2236]

22. As to claim 16, Wise (modified by Kim) teaches the logic determines whether the parameters received by the input are valid based on the picture type indicator and the number of motion vectors received by the input. [Kim - Col. 1 Lines 44-57]

23. As to claim 17, Wise (modified by Kim) teaches the motion vector address computer further comprises: a control register for providing the type of pictures [Wise - Pg. 51 ¶ 0682 Table A.3.2] and indicating the number of motion vectors received to the logic. [Wise - Fig. 23; Fig. 131; Fig. 127; Pg. 39 ¶ 0505, ¶ 0510; Pg. 142 ¶ 2073, ¶ 2079; Pg. 148 ¶ 2236]

24. As to claim 18, Wise (modified by Kim) teaches the motion vector address computer further comprises: one or more motion vector registers for storing motion vectors received by the input; [Wise - Pg. 51 ¶ 0682 Table A.3.2] and wherein the control register comprises one or more bits, each of which are associated with a corresponding one or the one or more motion vector registers, wherein the one or more bits are in a particular state, based on whether the corresponding motion vector register stores a motion vector. [Kim - Abstract; Col. 1 Lines 44-57; Fig. 1; Fig. 4; Fig. 6; Col. 6 Lines 8-12]

25. As to claim 19, Wise (modified by Kim) teaches the logic determines that the parameters are invalid if the control register indicates that the type of picture is an I-picture and any of the one or more bits are in the particular state. [Wise- Pg. 51 ¶ 0682 Table A.3.2; Pg. ¶ 0160; Pg. 13

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¶ 0165; Pg. 18 ¶ 0220-0221; Pg. 117 ¶ 1595; Kim - Abstract; Col. 1 Lines 44-57; Fig. 1; Fig. 4; Fig. 6; Col. 6 Lines 8-12]

26. As to claim 20, Wise (modified by Kim) teaches the logic determines that the parameters are invalid if the control register indicates that the type of picture is a B-picture and less than two of the one or more bits are in the particular state. [Wise- Pg. 51 ¶ 0682 Table A.3.2; Pg. ¶ 0160; Pg. 13 ¶ 0165; Pg. 18 ¶ 0220-0221; Pg. 117 ¶ 1595; Kim - Abstract; Col. 1 Lines 44-57; Fig. 1; Fig. 4; Fig. 6; Col. 6 Lines 8-12]

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mihara US 6,163,573.

Conclusion

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anner Holder whose telephone number is 571-270-1549. The examiner can normally be reached on M-Th, M-F 8 am - 3 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANH 09/13/07

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SUPERVISORY PATENT EXAMINER
TC 2600